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INSECT CONTROL REPORT

CACHE NATIONAL FOREST

FALL 1937

LODGEPOLE & LIMBER PINE

INSECT CONTROL PROJECT REPORT - CACHE NATIONAL FOREST

LODGEPOLE PINE AND LIMBER PINE

FALL 1937

Introduction

The forest area covered by this project included only those areas shown by the insect survey to have epidemic infestations. These areas may be divided into two groups, the lodgepole pine infestations and the limber pine infestations. This grouping has been made in this report in order that the comparative costs and other data may be made according to the species involved. Tabulations in the attached tables show the data for each species separately and for the project as a whole.

Personnel

Since the project allotment was made from S & E funds, all available forest guards and other summerlong temporary employees were used. Local men who were recommended by the District Ranger supplemented this force. Teams used were from Bear Lake valley, and were driven by their owners.

Units Treated

A total of 3647 acres of limber pine and lodgepole pine types were treated to control the Mountain Pine bark beetle (*Dendroctonus monticolae*). The units of treatment are described in the species reports below.

Project Organization

Four camps were used on the project since the epidemic types were widely scattered.

The largest camp was set up in Eagan Basin on October 5, 1937. Since this camp contained two crews, a cook was employed and subsistence was furnished by the government. Crews working from this camp treated 407 limber pine trees.

The second camp was set up in Bloomington Canyon on October 8, 1937. This camp held only one crew which subsisted itself. A total of 68 limber pine trees were treated in the areas east of Mud Lake, west of Mud Lake, in the head of the North Fork of St. Charles Canyon, and in the head of Bloomington Canyon.

The Bloomington Canyon crew moved their camp to Paris Canyon on October 23, 1937. 122 lodgepole pine trees were treated in Paris Basin and Green Basin from this camp.

The fourth camp was made at the Willow Springs R.S. on October 18. One crew treated 157 limber pine trees from this camp, working the areas above Canteen Springs, at the head of Dead Man Gulch, and north of Peter Sink. This crew furnished its own subsistence. A three man crew later used this camp as a base in treating 72 lodgepole pine trees in the stands near the head of Garden City Canyon, north of Swan Creek Peak, and near the old Logan-Green Canyon road.

History

There has been no limber pine treatment on the areas worked this fall previous to this project. All of the lodgepole pine stands described were treated in 1931, 1932 and 1934 except the area north of Swan Creek Peak, which has never been treated before.

Summary

As shown by the tables below, a total of 3674 acres of insect infested lodgepole and limber pine types were covered by control crews. 804 trees were treated at an average cost of \$ 3.06 each. 573 gallons of fuel oil were burned, or an average of 0.7127 gallons per tree. The total project cost was \$ 2462.40, of which \$ 181.10 were contributed and \$ 2281.30 were spent from project funds. 403 man days were spent on the project, of which 14 were contributed.

Some of the above figures are misleading since they include costs for treating both species.

Respectfully submitted
November 23, 1937

Blaine Chase

Field Assistant (Ass't. Chief of Party)

APPROVED:
11-26-37

John Mathews
Acting Forest Supervisor

COSTS OF INSECT CONTROL PROJECTCache National ForestInclusive dates work carried on October 1 to November 13, 1937 A.G. Nord
Forest SupervisorDate this report made November 23, 1937Insect responsible Dendroctonus monticolae

	Contributed time and expense	Project Funds	Total Cost
Salaries and wages Expenses Forest officers	\$ 122.76	1685.96	1808.72
Subsistence		320.24	320.24
Equipment - purchase, re- pair, freight, etc.		2.00	2.00
Oil	45.84		45.84
Hauling, including Government trucks		118.30	118.30
Horse hire	12.50	84.45	96.95
Horse feed		56.12	56.12
Miscellaneous		14.23	14.23
TOTAL COST OF PROJECT	181.10	2281.30	2462.40

No. man days contributed 14No. " " paid from project funds 369Total man days used 403

SUMMARY OF INSECT CONTROL PROJECT - LODGEPOLE AND LIMBER PINES

Date this report made Oct. 23, 1937Inclusive dates project carried on Oct. 1 to Nov. 13, 1937

Cache National Forest

A.G. Nord, Forest Supervisor

UNIT		NUMBER OF TREES TREATED				AREA	NUMBER	COST					OIL USED		MAN	SPECIES
No.	Name	Standing	Felled	Total	Cov-	Trees	Per Tree	Per	Per	Per	Per	Per	Per	Per	Days	
		No.	%	No.	%	Treat- ed	ered Acres	Treated per Acre	Direct	Contrib	Total	Direct	Contrib	Total	Work- ed	
1. & 2.	Peter Sink & Dead Man Gulch	0	0	73	100	73	401	0.1820	1.9505	0.1149	2.0654	.6775	.0399	.7174	39.5	Lbr. p
3.	Canteen Sprgs.	0	0	84	100	84	51	1.6471	1.9505	0.1149	2.0654	.6775	.0399	.7174	17.0	" "
4.	Swan Cr. Peak	22	100	0	0	22	158	0.1392	2.1641	0.3481	2.5122	.1853	.0298	.2151	7.0	LP p
5.	Garden City C.	33	94	2	6	35	510	0.0686	2.1641	0.3481	2.5122	.1853	.0298	.2151	11.5	" "
6.	Logan-Green Canyon road	10	67	5	33	15	173	0.0867	2.1641	0.3481	2.5122	.1853	.0298	.2151	7.0	" "
7, 8, 9, & 10	Eagan Basin	0	0	407	100	407	1514	0.2688	3.3051	0.2526	3.5577	.8885	.0679	.9564	230.0	Lbr. p
11.	North Fork of St. Charles	0	0	29	100	29	188	0.1543	3.3051	0.2526	3.5577	.8885	.0679	.9564		
12.	West of Mud Lake	0	0	16	100	16	144	0.1111	5.2921	0.1765	5.4686	.7592	.0253	.7845	52.0	" "
13.	East of Mud Lake	0	0	20	100	20	79	0.2532	5.2921	0.1765	5.4686	.7592	.0253	.7845		
14.	Bloomington Canyon	0	0	3	100	3	63	0.0476	5.2921	0.1765	5.4686	.7592	.0253	.7845		
15.	Paris Basin	16	80	4	20	20	216	0.0926	1.1420	0.2320	1.3740	.3120	.0634	.3754	5.0	LP P
16.	Green Basin	68	85	12	15	80	150	0.5333	1.1420	0.2320	1.3740	.3120	.0634	.3754	20.0	" "
TOTAL LODGEPOLE		149	86.6	23	13.4	172	1207	0.1425	3.1815	0.2102	3.3917	.8222	.0404	.8626	50.5	
TOTAL LIMBER PINE		0	0	632	100	632	2440	0.2590	3.1815	0.2102	3.3917	.8222	.0404	.8626	338.5	
GRAND TOTAL		149	18.5	655	81.5	804	3647	0.2205	2.8374	0.2252	3.0626	.6255	.0497	.6752	389.0	

INSECT CONTROL PROJECT # LIMBER PINE

CACHE NATIONAL FOREST

FALL 1937

Units Treated

During the fall of 1937 from October 1 to October 30, 2440 acres of the insect infested limber pine types on the Cache National Forest were treated to control the Mountain Pine bark beetle (*Dendroctonus monticolae*). The territory covered included only those areas shown by the insect survey to have epidemic infestations. These areas are listed as in the insect survey report:

- 1.& 2. North of Peter Sink near the summit of the Logan-Garden City road and in the head of Dead Man Gulch 73 insect infested limber pine trees were treated. These were heavily infested trees found in small groups in the limber pine types along the ridge tops. The shoestring type of about 401 acres was stripped 100% by the treating crew.
3. East of Canteen Springs a heavily infested group of 84 limber pine trees was treated on an area of 51 acres. Almost every limber pine tree in this type was infested, including many trees of eight and ten inch diameter. This group and the preceding one were treated from the Willow Springs camp.
- 7.,8.,9.,& 10. On the high ridges east, north and west of Eagan Basin 407 heavily infested limber pine trees were treated. This area of 1514 acres included the largest and worst infestation covered by the project. The majority of these trees were large and rough, requiring a large amount of work to treat. Two crews from the Eagan Basin camp treated to control the infestation in this area.
- 11.,12.,13.,& 14. North of the head of the North Fork of St. Charles creek on a high ridge, on high ridges east and west of Mud Lake (locally called Worm Creek Lake), and at the head of Bloomington Canyon a total of 68 limber pine trees were treated. These areas are rather widely scattered, and the trees are in small groups scattered through approximately 474 acres of the type. The trees were rather large and rough as well as being in very steep and rocky country. These trees were treated by the Bloomington Canyon camp.

Method of Treatment

All of the limber pine type covered was cruised 100 % . This was

done by five man treating crews using the strip method of cruising. Most of this work was done by the crews while on the way to or from camp. This system eliminated the necessity of carrying heavy and bulky tools over long unfruitful distances. All of the trees were found in groups, therefore this system worked very well.

Each crew consisted of five men, one foreman, one teamster, two fellers, and one decker and burner. The foremen had charge of their respective crews, supervised the work and assisted the men with their various jobs as they were needed. The teamster skidded the logs to the deck with his team and helped to pile them. The fellers cut all infested trees, bucked them into lengths to facilitate moving the logs to the decks, and peeled or burned the stumps.

All infested logs were burned in decks. The decks were made by piling the logs to be treated on dry skids in order to keep all infested logs clear of the ground, and insure complete treatment. All limbs were piled in the decks. In this manner no insect was allowed to escape, and the deck burned much better than if no limbs had been used. It was often necessary to place one or two dead trees in the deck to keep the fire hot enough to give a good treatment. Fuel oil was used to start the fire, but was not sufficient when used with no limbs or dead material, and not necessary after the fire was well started.

Foremen on the crews were paid at the rate of 65¢ an hour, the cook received \$125.00 per month, Three field assistants were paid \$ 120.00 per month and the project manager received \$ 135.00 per month, the remainder of the men were paid \$ 4.00 a day. Where subsistence was furnished by the government 28¢ per meal was deducted from the wages. Teams were paid \$ 25.00 a month when fed by the government, and \$ 2.00 a day when fed by the owner.

The men worked eight hours a day five and one-half days a week. Where subsistence was furnished and a cook employed the men walked to and from the field on their own time. In other cases the men went to work on government time and returned to camp on their own time.

Infestation

The infestation was uniformly heavy in this type. Trees were ordinarily hit with a great number of attacks and in groups of from two to fifty trees.

Fire Hazard

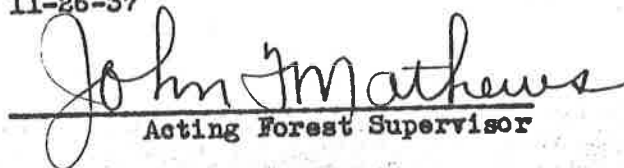
The season was wet and trees were all decked on bare ground in the openings of the stand, consequently there was very little fire hazard. In fact, more difficulty was experienced in getting some of the decks to burn than in stopping any fire from spreading. There was no fire suppression and control charge for the project.

Summary of the Project


As shown by the summary tables, a total of \$ 2011.28 was spent from project funds and \$ 132.84 was contributed time and expense, making a total cost of \$ 2144.12. 632 trees were treated at an average cost of \$ 3.3926 per tree, of which \$ 0.2102 was contributed. Approximately 2440 acres of insect host material were cruised 100% and treatment was made at an average cost of \$ 0.8787 per acre. 201 gallons of fuel oil were contributed to the project, and a cost of eight cents per gallon was estimated for the purpose of this report. 338½ man days were spent on insect control in limber pine.

APPROVED:

11-26-37


Acting Forest Supervisor

Respectfully submitted
November 23, 1937


Field Assistant (Ass't. Chief of Party)

FOREST SERVICECache National Forest
LOGAN, UTAH

OCT 5 1937

RECEIVED

COSTS OF INSECT CONTROL PROJECTCache

National Forest

Inclusive dates work carried on 10/1-10/30/37A.G. Nord

Forest Supervisor

Date this report made 11/23/37Insect responsible Dendroctonus monticolae

	Contributed time and expense	Project Funds	Total Cost
Salaries and wages Expenses Forest officers	116.76	1471.60	1588.36
Subsistence	- - -	320.24	320.24
Equipment - purchase, re- pair, freight, etc.	- - -	2.00	2.00
Oil	16.08	- - -	16.08
Hauling, including Government trucks	- - -	85.15	85.15
Horse hire	- - -	76.45	76.45
Horse feed	- - -	42.11	42.11
Miscellaneous	- - -	13.73	13.73
TOTAL COST OF PROJECT	132.84	2011.28	2144.12

No. man days contributed 121No. " " paid from project funds 338Total man days used 351

FALL 1937

SUMMARY OF INSECT CONTROL PROJECT - LIMBER PINE

Date this report made Oct. 23, 1937Inclusive dates project carried on Oct. 1, 1937 to Oct. 30, 1937

Cache National Forest.

A.G. Nord, Forest Supervisor

UNIT		NUMBER OF TREES TREATED				AREA	NUMBER	COST				OIL USED		MAN
No.	Name	Standing	Felled	Total	Cov-	Trees	Per Tree	Per	Acre	Total	Gallons	Days		
:	:	No.:	%	No.:	%	Treat-	Direct	Contrib	Total	Direct	Contrib	Worked		
:	:	No.:	%	No.:	%	ed	Acres	Treated	per	Acres	Gal-	per		
:	:	:	:	:	:	ed	Acres	per	Acres	:	lons	Tree		
:	:	:	:	:	:	:	:	:	:	:	:	:		
1.	&: Peter Sink	0	0	73	100	73	401	0.1820	1.9505	0.1149	2.0654	30	0.4109	39.5
2.	: Dead Man Gulch	0	0	84	100	84	51	1.6471	3.3051	0.2526	3.5571	8	0.0952	17.0
3.	: Canteen Springs	0	0	407	100	407	1514	0.2688	5.2921	0.1765	5.4686	138	0.3391	230.0
7.	:	:	:	:	:	:	:	:	:	:	:	:	:	:
8.	:	:	:	:	:	:	:	:	:	:	:	:	:	:
9.	: Eagan Basin	0	0	29	100	29	288	0.1543	5.2921	0.1765	5.4686	25	0.3676	52.0
10.	:	:	:	:	:	:	:	:	:	:	:	:	:	:
:	: North Fork of	0	0	16	100	16	144	0.1111	5.2921	0.1765	5.4686	:	:	:
11.	: St. Charles Cr.	0	0	20	100	20	79	0.2532	:	:	:	:	:	:
:	: W. of Mud Lake	0	0	3	100	3	63	0.0476	:	:	:	:	:	:
12.	: E. of Mud Lake	0	0	:	:	:	:	:	:	:	:	:	:	:
13.	: Bloomington Can:	0	0	:	:	:	:	:	:	:	:	:	:	:
:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
TOTAL	LIMBER PINE	0	0	632	100	632	2440	0.2590	3.1824	0.2102	3.3926	201	0.3180	338.5
:	:	:	:	:	:	:	:	:	:	:	:	:	:	:

INSECT CONTROL PROJECT - LODGEPOLE PINE

CACHE NATIONAL FOREST

FALL 1937

Units Treated

During the fall of 1937, from October 24 to November 13, 1207 acres of the insect infested lodgepole pine type on the Cache National Forest were treated to control the Mountain Pine bark beetle (*Dendroctonus monticolae*).

The territory covered included only those areas shown by the insect survey to have epidemic infestations. These areas of lodgepole pine are listed as in the insect survey report:

4. North of Swan Creek Peak, 22 trees were treated in an area of 158 acres covered by the control crew. The infestation here was epidemic in character, the trees found being in groups of from two to seven trees. This is an overmature stand of lodgepole pine sprinkled with poles and saplings of the same species and young stands resulting from old fires. It has never been covered by a control crew previous to this project. A three man crew from Willow Springs camp effected the control measures, using horses for riding and packing tools and oil. This area is not readily accessible except with horses.
5. At the head of Garden City Canyon 35 scattered trees were found and treated. The stand here is similar to the Swan Creek Peak stand. However the attacks were uniformly light and the infested trees were widely scattered in a type of approximately 510 acres. No grouped attacks were located. The crew and the methods of transportation were the same as above.
6. Above the Michelson mill at the head of Beaver Creek near the summit of the old Logan-Green Canyon road 15 trees were treated by the same crew. Much of this type has been cut over recently, therefore it was not stripped. Approximately 173 acres were stripped by the control crew in the upper portion of the type above the cuttings. Two groups of five trees each were found. Records show that this area was treated in the spring of 1931, the spring and fall of 1932, and the fall of 1934, and has always been in an endemic stage.

15. At the head of Paris Canyon, in a type bordering the edge of the open, grassy basin, 20 trees were treated. This is an overmature stand of lodgepole pine skirting the basin which merges into a mixed or sub-alpine type as it approaches the ridge. The treated trees were scattered throughout the type, of which about 216 acres were stripped. This basin was treated in 1931, 1932, and 1934. It was considered to be in an epidemic stage until 1932, and has since been considered endemic. Treatment was made by a five man crew from the Paris Canyon camp.
16. In the overmature lodgepole pine type bordering the north and west edges of Green Basin, 150 acres were stripped by the crew from the Paris Canyon camp. Eighty trees were treated in this area. The trees were not grouped, but were heavily infested in the main. This basin was also treated in 1931, 1932 and 1934 and has been considered endemic since 1932. This was the worst lodgepole pine infestation treated this fall.

Methods of Treatment and Crew Organization

The strip method of cruising was used, and the infested types were covered 100%. Two camps were used on the lodgepole pine project. The size and organization of crews varied in each camp.

In Paris and Green Basins a five man crew was used to strip the area, spotting and burning the trees as they occurred in the stand. This crew consisted of a foreman, three burners and a packer. The foreman was responsible for the camp and the crew, supervised and planned the work, and assisted the crew in running strip line and burning the trees. The burners ran strip line and burned the infested trees as they were located. The packer used two pack horses which carried tools and fuel oil, kept the pumps full of oil for the burners, and otherwise assisted the crew.

The crew was camped at Paris Canyon and furnished its own subsistence. The packer owned the pack horses and furnished their feed. This crew had been working on limber pine insect control previous to moving into this camp. It was decided to use the crew with no alterations for lodgepole pine insect control. This organization worked very well because the areas to be worked were readily accessible to a truck which carried a reserve supply of fuel oil and transported the men to and from work.

A three man crew camped at Willow Springs R. S. was used in all of the remaining lodgepole pine treatments. Most of the areas were inaccessible and several miles from the nearest camp location that was suitable. Therefore it was decided to use a small crew mounted on horseback, each man having a saddle horse and a pack horse. This organization permitted great flexibility in moving between units and permitted working longer distances from the same camp without undue loss of time. All necessary tools and forty gallons of fuel oil were carried by this crew each day.

All of the subsistence was furnished by the government to this crew and 28¢ a meal was deducted from their wages therefore. For the purpose of this report it is assumed that meals deductions were sufficient to pay for the actual costs of the food. No cook was employed so this is undoubtedly an adequate deduction. The horses used at this camp belonged to the government, therefore an amount equal to 50¢ per horse day used was added to the contributed costs of this report.

All men on the crews worked eight hours a day five and one-half days a week. They traveled to work in the field on government time and from the field to camp on their own time. The foreman of the Paris Canyon crew was paid at the rate of 65¢ an hour, and the men on his crew were paid \$ 4.00 a day. The Willow Springs crew was made up of summerlong employees who were paid at the same rates as they had received previously, which were; \$ 135.00, \$130.00 and \$ 120.00 per month respectively. Hired teams were paid \$ 2.00 a day and furnished their own feed.

Fire Hazard

Fall rains and snow kept the ground and litter sufficiently moist that the fire hazard was negligible; and the fire suppression and control charge for the project was consequently too small to mention.

Summary of the Lodgepole Pine Project

As shown by the summary table, a total of 172 lodgepole pine trees were treated at an average cost of \$ 1.85 and 1207 acres of this type was ridden of insect infested trees at an average cost of 26.37¢ an acre. The average density was 0.1425 trees treated per acre, and an average of 2.16 gallons of fuel oil were used in treating each tree. Fifty and one-half man days were spent on the project and 372 gallons of fuel oil were burned. A total of \$ 318.28 was spent of which \$ 48.26 was contributed time and expense and \$ 270.02 was spent from project funds.

Respectfully submitted
November 23, 1937

Blair C. Morse

Field Assistant (Ass't. Chief of Party)

APPROVED:
11-26-37

John Mathews
Acting Forest Supervisor

FALL - 1937

SUMMARY OF INSECT CONTROL PROJECT - LODGEPOLE PINE

Date this report made Nov. 23, 1937Inclusive dates project carried on 10/24/37 to 11/13/37

Cache National Forest

A.G. Nord, Forest Supervisor

UNIT		NUMBER OF TREES TREATED			AREA:	NUMBER	COST				OIL USED		MAN
No.:	Name	Standing	Felled	Total	Cover+	Trees	Per Tree		Per Acre	Total	Gallons	Days	
:	:	No.:	%	Treated	ed	Treated:	Direct	Contrib	Total	Direct	Contrib	Worked	
:	:	:	:	:	Acres:	per	:	:	:	:	:	:	
:	:	:	:	:	:	Acre	:	:	:	:	:	:	
4.	Swan Creek Peak	22	100	0	0	22	158	0.1392					
5.	Garden City Can.	33	94	2	6	35	510	0.0686					
6.	Logan-Green Can.	10	67	5	33	15	173	0.0867					
	road near top												
15.	Paris Basin	16	80	4	20	20	216	0.0926					
16.	Green Basin	68	85	12	15	80	150	0.5333					
TOTAL LODGEPOLE		149	86.6	23	13.4	172	1207	0.1425					

COSTS OF INSECT CONTROL PROJECT
(LODGEPOLE PINE)

Cache National Forest

Inclusive dates work carried on 10/24/37 to 11/13/37

A.G. Nord
Forest Supervisor

Date this report made Nov. 23, 1937

Insect responsible Dendroctonus monticolae

	: Contributed	: Project	: Total
	: time and	: Funds	: Cost
	: expense		
Salaries and wages	:	:	:
Expenses Forest	:	:	:
officers	6.00	214.36	220.36
Subsistence	---	---	---
Equipment - purchase, re-	:	:	:
pair, freight, etc.	---	---	---
Oil	29.76	---	29.76
Hauling, including	:	:	:
Government trucks	---	33.15	33.15
Horse hire	12.50	8.00	20.50
Horse feed	---	14.01	14.01
Miscellaneous	---	0.50	0.50
TOTAL COST OF PROJECT	48.26	270.02	318.28

No. man days contributed 1½

No. " " paid from project funds 50.5

Total man days used 52